

The Commission can address the concerns of Constellation and Motorola if it adopts the language proposed by LQP and Constellation as an addition to Section 25.120(e):

A licensee seeking to replace a non-geostationary satellite constellation with a constellation of technically-improved satellites should file an application two years prior to the desired replacement date or as otherwise required by a Public Notice announcing a cut-off date with respect to a potentially mutually-exclusive satellite system application or renewal. A new license term will begin at 3:00 a.m. on the date the licensee certifies to the Commission that its operations have been transferred to the constellation of technically-improved replacement satellites.

Such a modification would provide a procedure for licensees and Commission Staff to coordinate filing of second-generation systems as necessary. Thus, operators and the Commission would have the opportunity to consider and license the systems which at those times which best fit the needs of the operator and its market.

VII. THE COMMISSION SHOULD RECONSIDER ITS INTERIM PLAN.

Both LQP and Motorola have recommended that the Commission reconsider its "interim plan" for operation of licensed MSS systems in the event that 2 MHz of the 1610-1626.5 MHz band was impaired by the need to protect GLONASS receivers in the United States. See MSS Rules Order, at ¶¶ 52-53. As LQP pointed out, the United States should not adopt a policy of protecting GLONASS

receivers in the United States above 1606 MHz at all.⁷ An interim plan sends the wrong signal to the international aviation community that MSS systems can operate in less bandwidth than is available at 1610-1626.5 MHz and would permit GLONASS receiver manufacturers to build receivers over a wider bandwidth than is necessary. Moreover, the Russian Administration has already agreed to limit its carrier frequencies to below 1606 MHz by 1999 in order that the main emissions of its codes will not fall in the radioastronomy bands. See ITU Document 43-E, 16 November 1993 (submitted to WRC-93 Plenary meeting). Under these circumstances, adopting an interim plan would only encourage the Russian Administration to continue using channels above 1606 MHz.

LQP agrees with Motorola that, in any event the Commission should not adopt a plan based on speculation. See Motorola Petition, at 6-14. It will not be known whether the conditions on which the interim plan is premised would occur until GLONASS has been certified in the Federal Radionavigation Plan to provide precision approaches. See id., at 7-9. Even the Commission recognized in the MSS Rules Order (§ 128) that the need to protect GLONASS receivers had not yet been decided as a matter of U.S. policy. Accordingly, the Commission should not plan to protect operations that may never require protection.⁸

⁷ If spectrum becomes unavailable as a requirement to protect GLONASS receivers in the United States, then LQP supports the Commission's principle of equitable sharing of the impairment among CDMA and TDMA segments. See LQP Petition, at 18-19.

⁸ Protection levels for GLONASS receivers are currently under study by RTCA, Inc. The Commission should, at a minimum, defer any consideration of an

VIII. THE COMMISSION SHOULD REVISE CERTAIN RULES
ADOPTED FOR MSS ABOVE 1 GHZ.

LQP agrees with Constellation and TRW that the Commission should revise certain of its rules governing applicants and licensees in the 1.6/2.4 GHz MSS service. First, LQP agrees with Constellation that Sections 25.203(j)-(k) should be modified to bring these rules into conformance with the proposals of the Report of the MSS Above 1 GHz Negotiated Rulemaking Committee. In the case of Section 25.203(j), the following revision is required to limit the scope of the rule to space stations operating in the Ka-band which use steerable, narrow beam antennas:

(j) Applicants for non-geostationary 1.6/2.4 GHz Mobile-Satellite Service/radiodetermination satellite service feeder links in the bands 18.8-20.2 GHz and 27.5-30.0 GHz shall indicate the frequencies and spacecraft antenna gain contours towards each feeder-link earth station location and will coordinate with licensees of other fixed-satellite service and terrestrial-service systems sharing the band to determine geographic protection areas around each non-geostationary mobile-satellite service/radiodetermination satellite service feeder link earth station.

See Constellation Petition, at 10. This rule subsection was proposed by applicants which plan to use Ka-band feeder links, to provide for sharing the band with other users. Accordingly, the rule should refer to Ka-band frequencies where the applicants propose to use narrow feeder link spot beams, each of which is dynamically steered on board the satellite to point at a specific feeder link earth station location. This type of coordination is neither necessary nor feasible for

interim plan until the agencies which are developing criteria for coordination of MSS and GLONASS receivers have completed their analyses and issued recommendations. See Motorola Petition, at 9-11; LQP Petition, at 17-18.

non-GSO MSS systems operating with earth coverage feeder link antenna beams at frequencies below Ka-band.

LQP also supports Constellation's proposed revision to Section 25.203(k). See Constellation Petition, at 10-11. Constellation recommends a revision which provides that applicants proposing feeder link earth stations have the obligation to address in their applications conformance with the coordination agreements reached under Section 25.278 by the non-GSO MSS system operator. Accordingly, Section 25.203(k) should be revised as follows:

(k) An applicant for an earth station that will operate with a geostationary satellite or non-geostationary satellite in a shared frequency band in which the non-geostationary system is (or is proposed to be) licensed for feeder links, shall demonstrate in its application that its proposed earth station will not cause unacceptable interference to any other satellite network that is authorized to operate in the same frequency band, or certify that the operations of its earth station shall conform to established coordination agreements between the operator(s) of the space station(s) with which the earth station is to communicate and the operator(s) of any other space station licensed to use the band.

LQP agrees with Constellation that 25.203 generally is concerned with obligations of earth station applicants to select sites and frequencies that do not cause harmful or impermissible interference to terrestrial services. The requirement concerning coordination of the operation of the space stations already is contained in Section 25.278. Including a space station requirement in a rule which addresses earth stations is confusing and unnecessary.

LQP also agrees that the reference to Sections 25.203(j) and (k) in Section 25.114(c)(6)(iii) should be eliminated. See Constellation Petition, at 12. Inclusion

of feeder link frequencies in Section 25.114(c)(6) is duplicative of the requirements in Section 25.114(c)(5) where feeder link frequencies are required to be supplied as part of the radio frequency and polarization plan.

With regard to various revisions proposed to the rules adopted for the protection of radioastronomy, LQP generally supports the Commission's Rules and provides the following comments on the rule revisions proposed by Constellation and TRW. Constellation proposes that the position-determination capability of MSS systems be limited to the 1610.6-1613.8 MHz band in order to reduce the costs of some of the MSS user transceivers. See Constellation Petition, at 12-13. LQP opposes this proposal and, further, believes that Constellation's stated plan to operate in only a portion of the 1610-1626.5 MHz band available for use by the CDMA MSS systems could unduly complicate coordination among the CDMA systems. In any event, if Constellation decides to operate only in one portion of the band, then it must still conform to the sharing trigger values decided upon by all licensed CDMA systems. The Commission should avoid unduly complicating the band-sharing plan and reject Constellation's proposal.

TRW proposes a revision to the Commission's requirement that a beacon-actuated system of protecting radioastronomy sites may be used in lieu of a fixed protection zone only "if a coordination agreement is reached between a mobile-satellite system licensee and the ESMU on the specifics of beacon operations." TRW Petition, at 9-10. LQP opposes TRW's proposed rule change because, as a

practical matter, an agreement between ESMU and the MSS system operator would be needed to ensure that adequate protection for RAS sites is achieved.

The Commission also should reject TRW's request that mobile earth stations transmitting in the 1613.8-1626.5 MHz band may, as a third alternative approach to protecting radioastronomy, limit out-of-band emissions so as not to exceed -178 dB(W/m²/1MHz) during observations at the radioastronomy sites listed in Section 25.213(a)(1)(i) and -138 dB(W/m²/1MHz) during observations at the sites listed in new Section 25.213(a)(1)(ii). TRW Petition, at 11-12. This approach may be feasible if the Commission uses a 20 kHz reference bandwidth. Radioastronomy observations in the 1610.6-1613.8 MHz band are made with an assumed spectral line channel bandwidth of 20 kHz (CCIR Report 224-7). Based on this 20 kHz bandwidth, the interference levels in the RAS band during observations should not exceed -195 dB(W/m²/20 kHz) at the sites listed in Section 25.213(a)(1)(i) and -155 dB(W/m²/20 kHz) at the sites listed in Section 25.213(a)(1)(ii).

With regard to revisions to Sections 25.213(c) and 25.213(d), LQP supports the revisions proposed by Constellation. The final two sentences of Section 25.213(c) should be eliminated, and Section 25.213(d) revised as Constellation proposes, in order to clarify the co-primary status of MSS with other services. The current language in these rules, which suggest MSS systems may not cause harmful interference to or claim protection from aeronautical radionavigation services, are not necessary in view of the uplink e.i.r.p. density limits placed on mobile earth stations.

IX. CONCLUSION.

LQP requests that the Commission take action on the petitions of AMSC, Constellation, Motorola and TRW as outlined above.

Respectfully submitted,

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Date: December 20, 1994

CERTIFICATE OF SERVICE

I, William D. Wallace, hereby certify that I have on this 20th day of December, 1994, caused copies of the foregoing Consolidated Opposition to and Comments on Petitions for Reconsideration to be delivered via hand delivery (indicated with *) or by U.S. mail, postage prepaid, to the following:

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